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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/874,872

06/05/2001

Atul Puri

2001-0161A

6019

7590

12/28/2005

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EXAMINER

WONG, ALLEN C

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,872

Applicant(s)

PURI ET AL.

Examiner

Allen Wong

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/15/05 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 13 and 21 have been read and considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (5,748,789) in view of Lennon (6,516,090).

Regarding claims 1, 9, 13, 15, 18 and 21, Lee discloses a method of encoding video content, the method comprising:

Art Unit: 2613

extracting video portions from video content (fig.33 and col.42, ln.34-38; note video object information is extracted and segmented from the input video sequence; also, note fig.35 discloses extracting multiple video objects 1540, 1542 and 1544b);

identifying video subsegments and regions of interest within the video portions (fig.33, element 1502, col.42, ln.34-46, and fig.35, note segments and subsegments of the regions of interest are identified);

assigning a predefined model to each video portion according to a characteristic of the video portion, the predefined model being chosen from a plurality of predefined models or a generic model (col.42, ln.47-61; note each video object has an arbitrary shape, and that each video object is predefined according to its shape, thus, each video object or video portion is assigned a predefined model by a mask of alpha values or a binary mask);

encoding video portions associated with the generic model with a generic encoder (fig.33 and col.42, ln.62-65; note object coders 1504-1508 encode video portions associated with the generic model); and

encoding video portions associated with the plurality of predefined models with a encoder chosen from a plurality of encoders, each of the plurality of encoders being associated with one of the plurality of predefined models (fig.33 and col.43, ln.10-15; note the multiplexer 1510 is used to multiplex and encode video portions from plural video object encoders 1504-1508).

Lee does not specifically disclose the predefined model selected from a plurality of predefined models, and each encoder being associated with one predefined model of

Art Unit: 2613

the plurality of predefined models. However, Lennon teaches the predefined model selected from a plurality of predefined models, and each encoder being associated with one predefined model of the plurality of predefined models (col.13, ln.49-65; Lennon discloses that the regions can be separately coded where there are model parameters for each separately coded region). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Lee and Lennon, as a whole, for efficiently, precisely encode spatial and temporal video data while maintaining high image quality (col.3, ln.50-57).

Note claims 5-8, 14, 16, 19, 20 and 22 have similar corresponding elements.

Regarding claims 2-4, 10, 12 and 17, Lee discloses further comprising:
producing descriptors associated with the video portions of the video content (col.51, ln.4-59; note there are plural flags that can aid the determination of the video portions of the video content); and

producing descriptors associated with the video subsegments and regions of interest (col.51, ln.4-59; note there are plural flags that can aid the determination of the video subsegments of the video content).

Regarding claim 11, Lee discloses further comprising:

encoding the descriptors associated with the video portions, video subsegment and regions of interest (fig.33, note the descriptors are encoded along with the video object information by encoders 1504-1508).

Regarding claims 27-29, Lee discloses a coded bitstream having portions of the bitstream encoded using different encoders according to models associated with the

Art Unit: 2613

subject matter of each portion of the bitstream, the coded bitstream encoded according to the method of claims 1, 18 and 21, respectively (fig.33 and col.42, ln.62-65; note different video object coders 1504-1508 encode video portions associated with the generic model; col.43, ln.10-15; note the multiplexer 1510 is used to multiplex and encode video portions from plural different video object encoders 1504-1508).

Lee does not specifically disclose the predefined model selected from a plurality of predefined models, and each encoder being associated with one predefined model of the plurality of predefined models. However, Lennon teaches the predefined model selected from a plurality of predefined models, and each encoder being associated with one predefined model of the plurality of predefined models (col.13, ln.49-65; Lennon discloses that the regions can be separately coded where there are model parameters for each separately coded region). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Lee and Lennon, as a whole, for efficiently, precisely encode spatial and temporal video data while maintaining high image quality (col.3, ln.50-57).

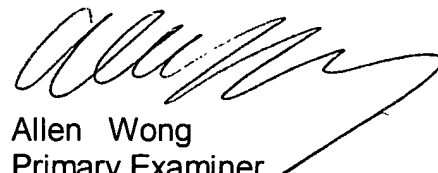
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

Art Unit: 2613

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Wong
Primary Examiner
Art Unit 2613

AW

12/21/05